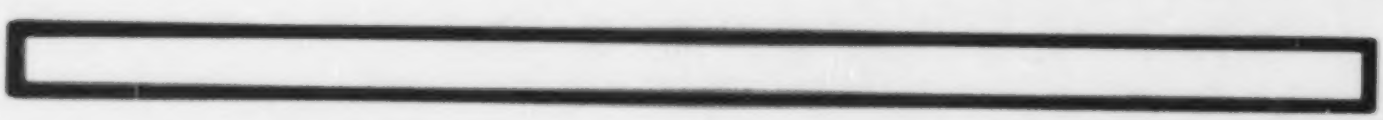
PB87-183786

Superfund Record of Decision (EPA Region 3)
Westline Site, McKean County, Pennsylvania
July 1986

(U.S.) Environmental Protection Agency
Washington, DC

4 Sep 86



U.S. Department of Commerce
National Technical Information Service
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United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

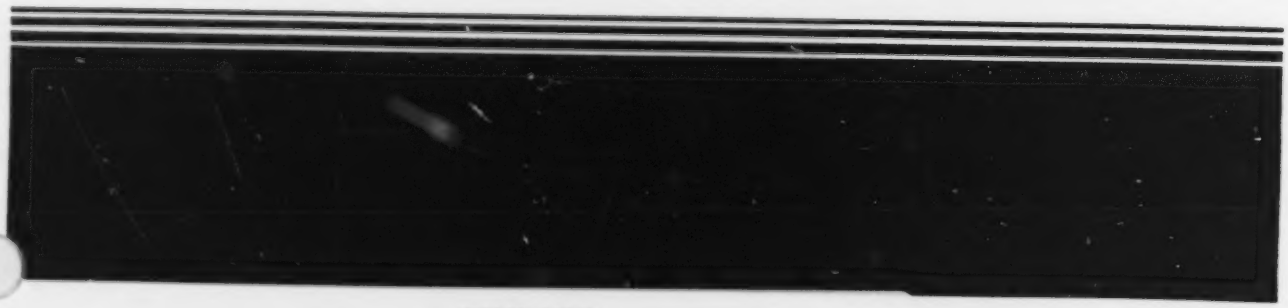
EPA/ROD/R03-86/024
September 1986

PB87-183786

EPA

Superfund Record of Decision:

Westline, PA



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48P

TABLE 6. Predicted Full-Scale Carbon Use Rates for Aldicarb

Influent ug/L	50			100		
Effluent ug/L	20	9	1.3	20	9	1.3
Use Rate lb/1000 gal						
A	0.0199	0.0203	0.0211	0.0305	0.0311	0.0321
B	0.0217	0.0225	0.0237	0.0338	0.0349	0.0358

A: Model prediction
B: Scaled-up from microcolumn breakthrough curve
Water: Filtered Ohio River, pH = 8.15 - 8.34, temp = 21°C, TOC = 1.9 - 2.2 mg/L
Carbon: Calgon Filtrasorb 400
Contactor: 8 ft depth, 4 gpm/ft^2, 15 min. EBCT
Freundlich isotherm: K = 194 umole/g (L/umole)$^{1/n}$, 1/n = 0.41
Microcolumn: 0.4 cm diameter x 4.7 cm depth, 37.4 gpm/ft^2
EBCT = 0.031 min, mesh = 100 x 200

TABLE 5. Predicted Full-Scale Carbon Use Rates for Alachlor

Influent ug/L	10		20			50		
Effluent ug/L	1	5	1	5	10	1	10	25
Use Rate lb/1000 gal	0.0038	0.0031	0.0061	0.0055	0.0052	0.011	0.01	0.009

Water: filtered Ohio River, pH = 8, temp = 21°C, TOC = 2.5 mg/L
Carbon: Calgon Filtrasorb 400
Contactor: 3 ft. depth, 4 gpm/ft^2, 5.62 min. EBCT
Freundlich isotherm: K = 328 umole/g (L/umole)$^{1/n}$, 1/n = 0.38

TECHNICAL REPORT DATA *(Please read Instructions on the reverse before completing)*		
1. REPORT NO. EPA/ROD/R03-86/024	2.	3. RECIPIENT'S ACCESSION NO. PB87 183786/AS
4. TITLE AND SUBTITLE SUPERFUND RECORD OF DECISION Westline Site, PA		5. REPORT DATE September 4, 1986 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT NO. 11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460		13. TYPE OF REPORT AND PERIOD COVERED Final ROD Report 14. SPONSORING AGENCY CODE 800/00
15. SUPPLEMENTARY NOTES		

16. ABSTRACT

The Westline Site is located in Westline, Lafayette Township, McKean County, PA. The site, encompassing approximately 40 acres, is bordered by Kinzua Creek to the south, Turnip Run to the east, and a wetland area to the west. For the purpose of this investigation, the northern border extends 250 feet north of the former chemical plant foundation. Located at the center of the site is a popular landmark, the Westline Inn. Beginning in 1901, the Day Chemical Company, converted lumber into charcoal, methanol and acetic acid. The plant changed owners three times before equipment deterioration and declining profits forced its closure in 1952. Several tar-like deposits from the wood chemical processing operations remain onsite. The largest deposit was excavated in September of 1983 by the removal action implemented by the EPA. Another tar deposit, approximately 6 inches deep and 1,500 square feet in total area, still exists. Several smaller tar deposits are located intermittently in the low-lying areas of the ground surface. Tar is also seen along the banks of an unnamed tributary. The FS has estimated a total of 710 cubic yards of tar and tar soils onsite. During the initial EPA site inspection in July of 1982, a sample of waste material was collected from tar seepage and analyzed for priority pollutants. Eighteen tentatively identified compounds were detected. In March 1986, a second wood tar sample was collected to verify the presence or absence of polynuclear aromatic hydrocarbons (PAH). The primary
(See Attached Sheet)

17. KEY WORDS AND DOCUMENT ANALYSIS		
a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision Westline Site, PA Contaminated Media: gw, sw, sediments, soils, wetlands Key contaminants: phenols, PAH compounds		
18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(This Report)* None	21. NO. OF PAGES 45
	20. SECURITY CLASS *(This page)* None	22. PRICE

EPA Form 2220-1 (Rev. 4-77) PREVIOUS EDITION IS OBSOLETE

EPA/ROD/R03-86/024
Westline Site, PA

16. ABSTRACT (continued)

contaminants of concern include phenol, 2,4-dimethylphenol, PAH compounds.

The selected remedial action for this site includes: excavation of all wood tar deposits and subsequent hauling of these wastes to a permitted offsite facility; backfilling of the excavated areas with clean soil and vegetation; incineration of excavated deposits with a high heating value and low ash content technique; ground water verification study; air monitoring. The baseline capital costs for this remedial action is $744,000. O&M will not be required for the areas where tar will be excavated, but periodic inspection of the areas to assure the remedy is effective will be necessary. Following the ground water verification study, O&M will be re-considered.

RECORD OF DECISION
REMEDIAL ALTERNATIVE SELECTION

Site: Westline Site, McKean County, Pennsylvania

Documents Reviewed:

The following documents which describe the analysis of cost-effectiveness and feasibility of remedial alternatives for the Westline Site have been reviewed. Also, meetings to discuss these remedial alternatives have been conducted with the State and the general public. I have been briefed by my staff on the documents and the meetings and they form the principal basis for my decision.

- Remedial Investigation Report, Volumes I and II, Westline Site, McKean County, Pennsylvania, April 1986, prepared by NUS Corporation.

- Feasibility Study Report, Westline Site, Westline, Pennsylvania, May 1986, prepared by NUS Corporation.

- Remedial Action Master Plan, Westline Site, McKean County, Pennsylvania, October 1983, prepared by NUS Corporation.

- Federal On-Scene Coordinator's Report, Emergency Response/Immediate Removal Action, Westline, Pennsylvania, Mike Zickler, On-Scene Coordinator.

Description of Selected Remedy:

1. The waste tar will be excavated from the existing pit behind the Westline Church, from the interspersed tar deposit areas in the south and south-western portions of the site along Kinzua Creek and from the banks of the unnamed tributary. The waste tars will be incinerated offsite.

2. Backfilling the excavated areas with clean soil and revegetating will be required.

3. The tar deposits will be excavated to the soil level. Sampling and analysis will be conducted during excavation to be sure contaminated soils are removed to a level equivalent to a 10^{-4} cancer risk for direct contact with soils over a 20 year period. This level is chosen because it is similar to some of the background levels found in the community. The removal of the tar deposits will also insure that the remaining PAHs in soils will not leach from the soils to the ground water in concentrations that will exceed levels equivalent to a 10^{-6} cancer risk for ingestion of ground water.

4. As a safety precaution, air monitoring will be conducted during excavation.

5. Packaging of the waste tar materials will be compatible with incinerator facility requirements.

6. Transportation and disposal of the waste tar materials will be conducted in accordance with State and Federal Department of Transportation (DOT) requirements, including applicable Resource Conservation and Recovery Act (RCRA) requirements; the material will be transported to a RCRA permitted facility for incineration.

7. A ground water verification study will be conducted to determine if the contamination at monitoring well MW-006 is present downgradient or in higher concentrations in the upper most zone of ground water. Specifics of the number and well locations will be determined in the next stage for design of the remedial action.

Operation and Maintenance (O&M):

O & M will not be required for the areas where tar will be excavated, but periodic inspection of the areas to assure that the remedy is effective will be necessary. Following the ground water verification study, O & M will be re-considered.

Declarations:

Consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) (42 U.S.C. §§9601-9657) and the National Contingency Plan, 50 Federal Register 47912 (November 20, 1985) to be codified at 40 CFR § 300, I have determined that the remedial action described above, together with proper operation and maintenance, constitute a cost-effective remedy which mitigates and minimizes damage to public health, welfare, and the environment. The remedial action minimizes or eliminates the threat of further contamination to the ground water, the wetland areas, and the environment. The Pennsylvania Department of Environmental Resources has been consulted and agrees with the approved remedy. These activities will be considered the approved action and eligible for Trust Fund monies.

I have determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites.

7/3/86
Date

James M. Seif
Regional Administrator

Summary of Remedial Alternative Selection

Westline Site

Site Location and Description:

The Westline Site is located in the rural town of Westline, Lafayette Township, McKean County, Pennsylvania. As shown in Figure 1, the site is located in northwest Pennsylvania and is approximately 15 miles south-southwest of Bradford and 8 miles northwest of Kane, Pennsylvania.

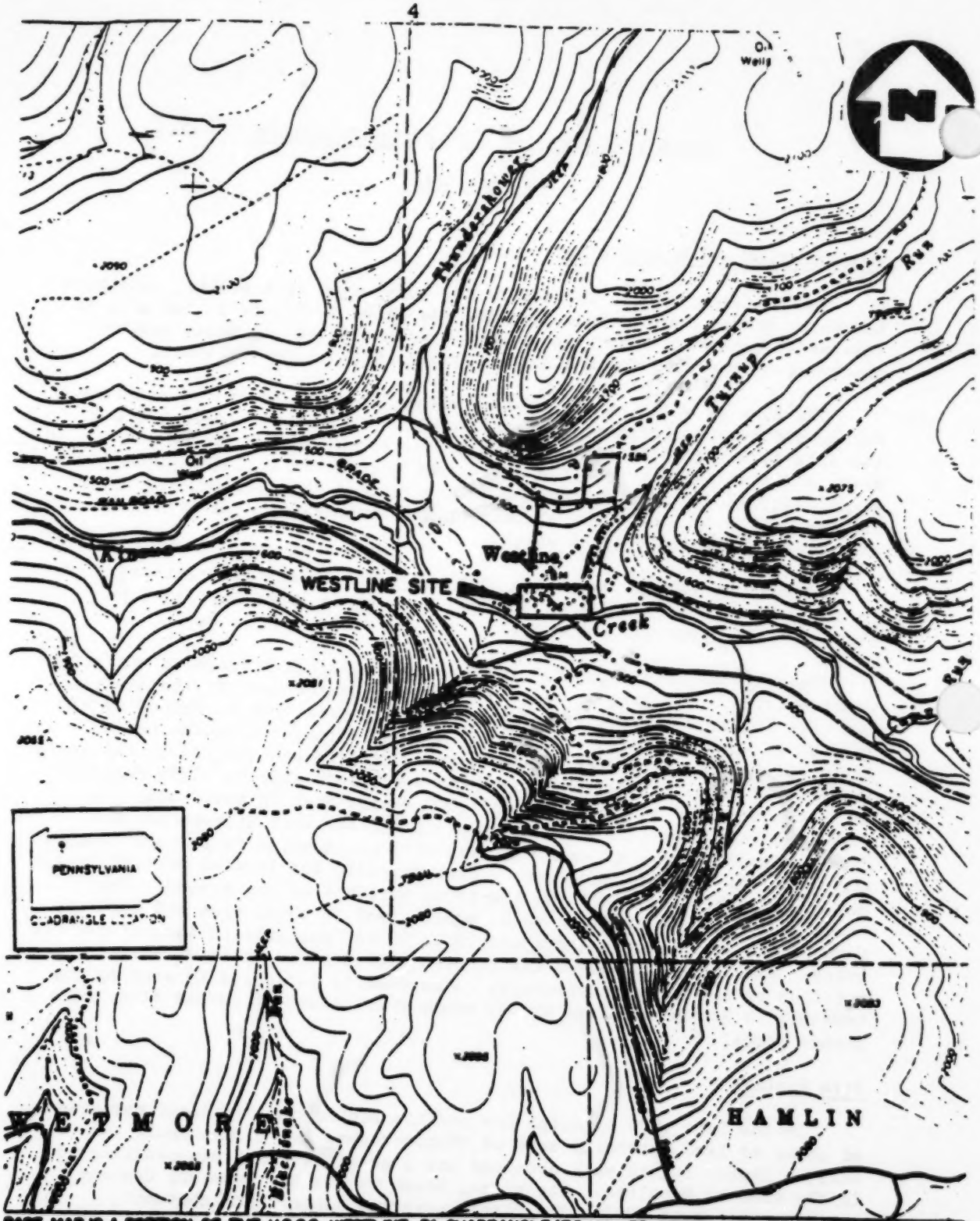
The town of Westline is situated along Kinzua Creek and is completely surrounded by the Allegheny National Forest. As shown in Figures 1 & 2, the site is bordered by Kinzua Creek to the south, Turnup Run to the east, and a wetland area to the west. For this Remedial Investigation/ Feasibility Study (RI/FS), the northern border of the site extends about 250 feet north of the former chemical plant foundation. The site area encompasses approximately 40 acres.

Located at the center of the site, adjacent to the main intersection in town, is the Westline Inn. The Westline Inn is a popular landmark that provides overnight accommodation, a restaurant, and a bar.

Several tar-like deposits from the wood chemical processing operations remain onsite. The largest deposit was once located next to the Westline Inn (See Figure 3). However, this deposit was excavated in September of 1983 by an Emergency Response Removal Action implemented by the United States Environmental Protection Agency (USEPA), Region III, in Philadelphia. Another tar deposit still exists behind Westline's church. This deposit is approximately 6 inches deep and 1,500 square feet in total area. A fence has been erected around it to avoid surface soil disturbance and direct contact. Several small tar deposits are located in the southcentral and southwest areas of the site. These deposits are located intermittently but are generally found in the low-lying portions of the ground. They range from a few square feet to 25 square feet in total area and from one inch to one foot thick. There are 10 to 20 tar deposits in each of the two areas. Smaller tar seepages can be seen with dredged material along portions of the unnamed tributary. A backhoe is periodically used by the township to dredge portions of the unnamed tributary to permit flow into Kinzua Creek.

Site History:

In the late 1890's, Ralph Day and his son Edmund purchased thousands of acres of land extending east of Thundershower Run to the small town of Guffy. Timber rights were obtained and a chemical plant was constructed in the town of Westline. The plant, known as The Day Chemical Company, began operating in 1901. The plant converted lumber into charcoal, methanol, and acetic acid. The basic process consisted of heating the lumber in the absence of oxygen, to a very high temperature, driving off the chemicals and turning the remaining wood into charcoal. The chemicals were treated to produce methanol and acetic acid. The charcoal was then sold to iron producers. The methanol and acetic acid were also sold, since they generated a reasonable profit.



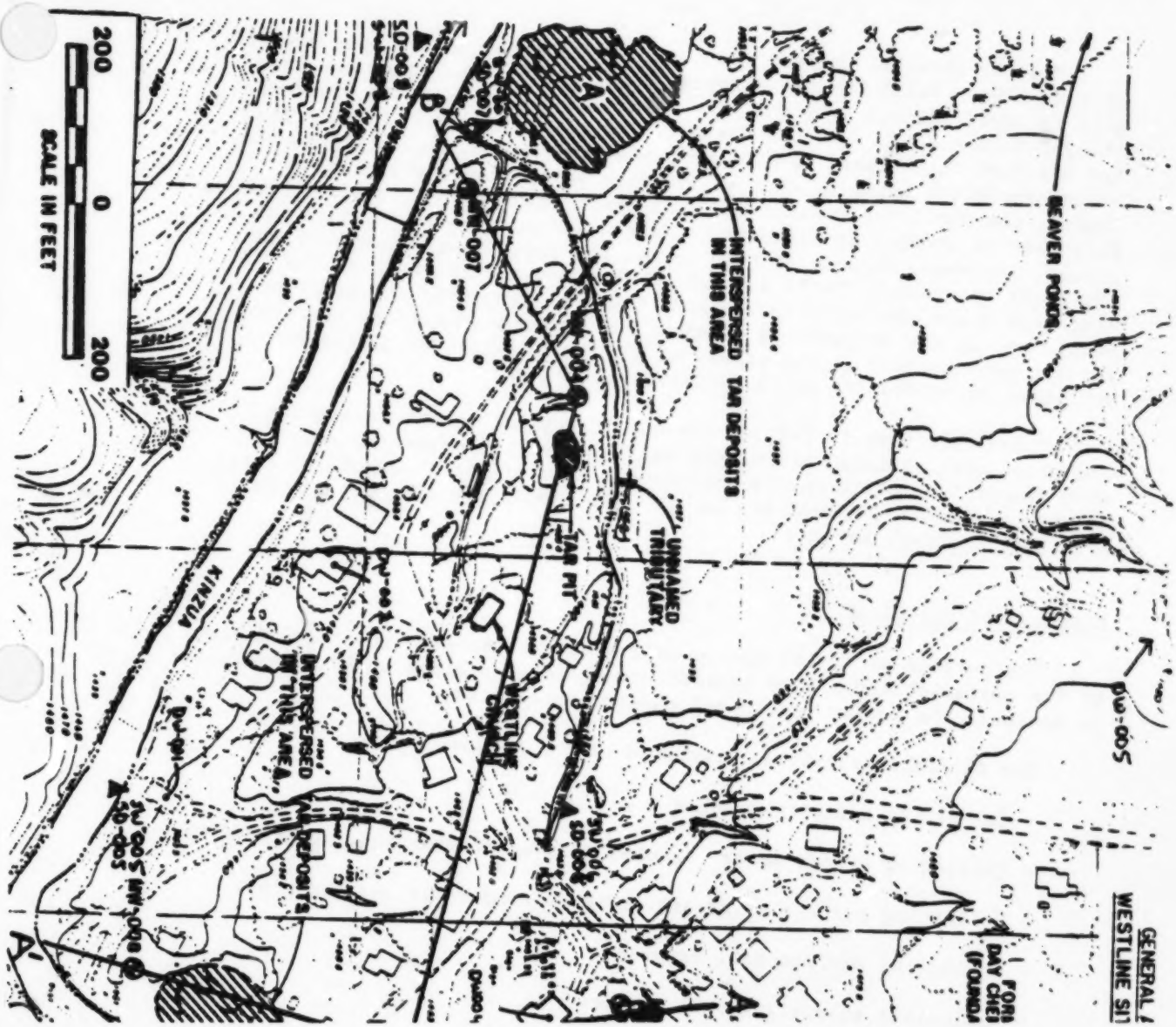
BASE MAP IS A PORTION OF THE U.S.G.S. WESTLINE, PA QUADRANGLE (7.5 MINUTE SERIES, 1966, PHOTOREVISED 1973). CONTOUR INTERVAL 20'.

LOCATION MAP
WESTLINE SITE, WESTLINE, PA

SCALE: 1" = 2000'

NUS CORPORATION
A Halliburton Company

FIGURE 1


200
0
200
SCALE IN FEET
A
A'
B
B'
BEAVER POND
INTERSPERSED TAR DEPOSITS IN THIS AREA
UNNAMED TRIBUTARY
TAR PIT
KINZUA
PW-005
GENERAL WESTLINE SIT

The Day Chemical Company was closed in 1930 due to the poor health of Edmund Day (Ralph Day had already passed away). The plant was then sold to David Hancock of Olean, New York, and the name of the plant was changed to the Union Charcoal Company. By 1940, the plant deteriorated and was just about ready to shut down when an explosion occurred in the ether separating unit. With the insurance money from the explosion damage, the plant was rebuilt and soon began reaping great profits because World War II brought an increase in demand and consequently a rise in prices. However, because of high taxes, the company was dissolved and the plant was sold to David and Robert Handcock and their wives who named the plant the Westline Chemical Company. In 1946, the plant was bought out by the Susquehanna Chemical Company and operations continued for six more years. In the summer of 1952, the plant was closed due to equipment deterioration and a decline in profits.

Today, all that is left of the chemical plant is the foundation. The plant site, located behind the Westline Inn, is presently covered with demolition debris and is overgrown. Most of the thousands of acres bought by Ralph and Edmund Day in the late 1890's are now part of the Allegheny National Forest.

Findings of the RI:

The purpose of the RI was to determine the nature, extent and impact of the contamination. Then appropriate remedial actions could be evaluated to mininize the public health and environmental risks.

The RI field activities consisted of the following:

- Installing monitoring wells
- Collecting ground water samples from monitoring and domestic wells
- Collecting surface water and sediment samples in wetland areas
- Collecting surface soil samples
- Collecting subsurface soil samples
- Collecting benthic organisms and fish samples

Waste Tar

Tar deposits are still present at the Westline Site. The largest of these is located behind the Westline Church. This deposit covers approximately 1,500 square feet and is six inches deep. Tar was also seen along the banks of the unnamed tributary. Deposits have also been detected at two other areas of the site. These deposits are relatively small in size and are generally found in the low lying areas of the ground surface. The FS has estimated a total of 710 cubic yards of tar and tar soils onsite.

During the initial site inspection, conducted by EPA Region III in July of 1982, a sample of the waste material was collected from a tar seepage located along the berm of the road and analyzed for acid extractable and base neutral priority pollutants. The results are given in Table 1. Phenol and 2,4-dimethyl phenol were the only priority pollutants detected, at 953 and 934 mg/kg, respectively. However, 18 tentatively identified compounds were detected at estimated concentration ranging from 110 to 5,700 mg/kg.

To better determine the contaminants at the Westline Site, another wood tar sample was collected from the tar deposit behind the Westline Church in March of 1986. The purpose for collecting a second wood tar sample was to verify the presence or absence of polynuclear aromatic hydrocarbons (PAHs). PAHs are common constituents of waste materials that form by either pyrolysis or combustion. The previously analyzed wood tar sample (collected in July of 1982 by EPA) did not indicate the presence of PAHs because of interference in the detection instrument caused by the viscosity and chemical complexity of the wood tar sample.

The second wood tar sample (collected in March of 1986) was dissolved in methylene chloride and was analyzed by Gas Chromatography using a single packed column and flame ionization detection (GS/FID) for PAH compounds only. Analysis of this sample exhibited the following PAH compounds in the following estimated concentrations:

Compounds	Concentration (mg/kg)
naphthalene	15,000
acenaphthene	26,000
acenaphthylene	5,600
fluorene	11,000
phenanthrene	1,900
fluoranthene	1,900
pyrene	2,600
benzo(a)anthracene	1,600

TAR SEEP ANALYSIS OF HSL ACID AND BASE/NEUTRAL CONTAMINANTS
SAMPLED BY EPA REGION III (8/12/82)
(All values in mg/kg)

P. P. No.	CAS No.	Contaminants	Concentration
		Acid Extractable	
G5A	108-95-2	phenol	953
34A	105-67-9	2,4-dimethyl phenol	934
		Base Neutral	
		None detected	
		Tentatively Identified Compounds (TICs)	
		Dihydro-2-(3H)-furanone	590J
		3-Methyl-2-cyclopenten-1-one	240J
		2-Methyl-2,5-cyclohexadiene-1,4-dione	360J
		2-Hydroxy-3-methyl-2-cyclopentene-1-one	1600J
		Methylphenol isomer	540J
		3,4,5-Trimethyl-2-2cyclopenten-1-one	770J
		Dimethyl phenol isomer	650J
		1,2-Benzendiol	3200J
		Ethylmethyl phenol isomer	1600J
		Ethylmethyl phenol isomer	1300J
		Methyl benzenediol	880J
		2,6-Dimethoxyphenol	5700J
		1-(4-Hydroxy-3-methoxyphenyl)ethanone	320J
		1-(4-Hydroxy-3-methoxyphenyl)-2-propanone	620J
		2,6-Dimethoxy-4-(2-propenyl)phenol	450J
		1-(4-Hydroxy-3,5-dimethoxyphenyl)ethanone	490J
		Hydrocarbon (Best Match - 17-pentatricontene)	110J
		Hydrocarbon (Best Match - 17-pentatricontene)	110J

J - denotes an estimated concentration

TABLE 1

A total of eight PAH compounds were found by this analysis. To confirm the presence of the above compounds, the tar solution was analyzed by the Gas Chromatographic/Mass Spectrometric (GC/MS) method for base/neutral and acid extractable compounds. The analysis of the tar solution revealed phenol at 1,650 mg/kg. This detection corresponds well with the presence of phenol in the analysis of the wood tar sample collected in July of 1982. However, PAH compounds were not reported in the tar solution sample from 1986 because of high GC/MS detection limits. The GS/FID detection limits were lower than the GC/MS. Therefore, the presence of PAH compounds could not be confirmed by GC/MS analysis due to insufficient analytical sensitivity.

In February of 1983, three waste samples were collected by EPA Region III and evaluated for corrosivity, ignitability, EP toxicity, and reactivity, as defined in CFR 40, Part 261, Subpart C. The tar waste did not exhibit the characteristics of corrosivity, ignitability or reactivity and the EP Toxicity Test extract did not exceed the maximum allowable concentrations. Even though this is not a RCRA waste, there are public health risks associated with the carcinogenic PAH compounds and the levels of phenols in the waste tar. Also the waste tars are located in the flood plain and excavation of the tar is necessary for protection of the environment.

Geology and Hydrogeology

The Westline Site lies in the Appalachian Plateaus physiographic province. The province is an old plateau which has been deeply dissected by stream erosion. In the general area of the site, flat hill tops lie at about 2,100 feet elevation with valleys cut 500 to 600 feet below the tops of the hills. The region is part of the Allegheny River Drainage basin and the site lies on the flood plain of Kinzua Creek.

Thick alluvial deposits of clay, silt, sand and gravel are found in the valleys and flood plains. The soils in the Westline area consist of the Braceville silt loam. The bedrock unit which underlies the alluvium at the Westline Site is the Cattaraugus Formation. It is composed of shale, siltstone and sandstone.

The site specific geologic investigation involved the drilling of eight boreholes to determine the subsurface stratigraphy, obtain subsurface soil samples and to install monitoring wells. Figures 3 & 4 show the geologic cross sections and some of the monitoring well locations.

The water producing zones consist of three basic subunits, each consisting of coarse-grained material at the base and fine-grained sediments at the top. The lowest subunit, Zone 3, is composed of coarse gravels, cobbles, and sands and ranges from five to 15 feet thick on top of bedrock. This unit is overlain by approximately 25 feet of silt and clay. The second subunit, Zone 2, ranges from 13 to 19 feet thick and bottoms approximately 50 feet below ground. This subunit is composed of clean sands and gravels to silty sands and gravels. It is overlain by sandy silts to clays ranging from nine to 20 feet in thickness. The upper subunit, Zone 1, is also composed of clean sands and gravels to silty sands and gravels. The base of the upper unit ranges from 15 to 30 feet below the ground. Thin silty soil overlies this unit to the surface.

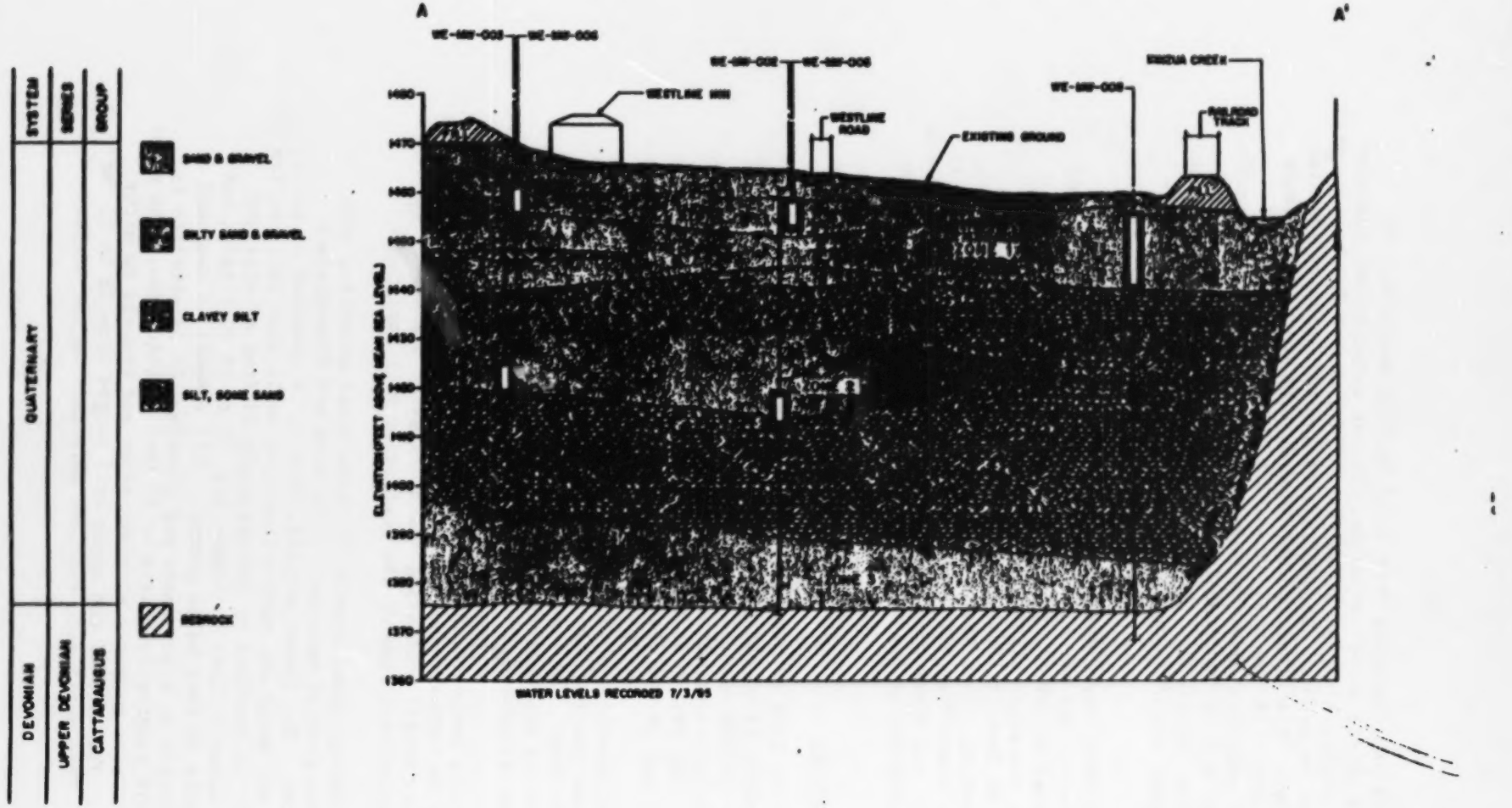
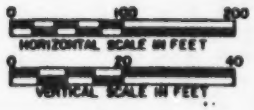


FIGURE 3

GEOLOGIC CROSS-SECTION A-A'
WESTLINE SITE, WESTLINE, PA



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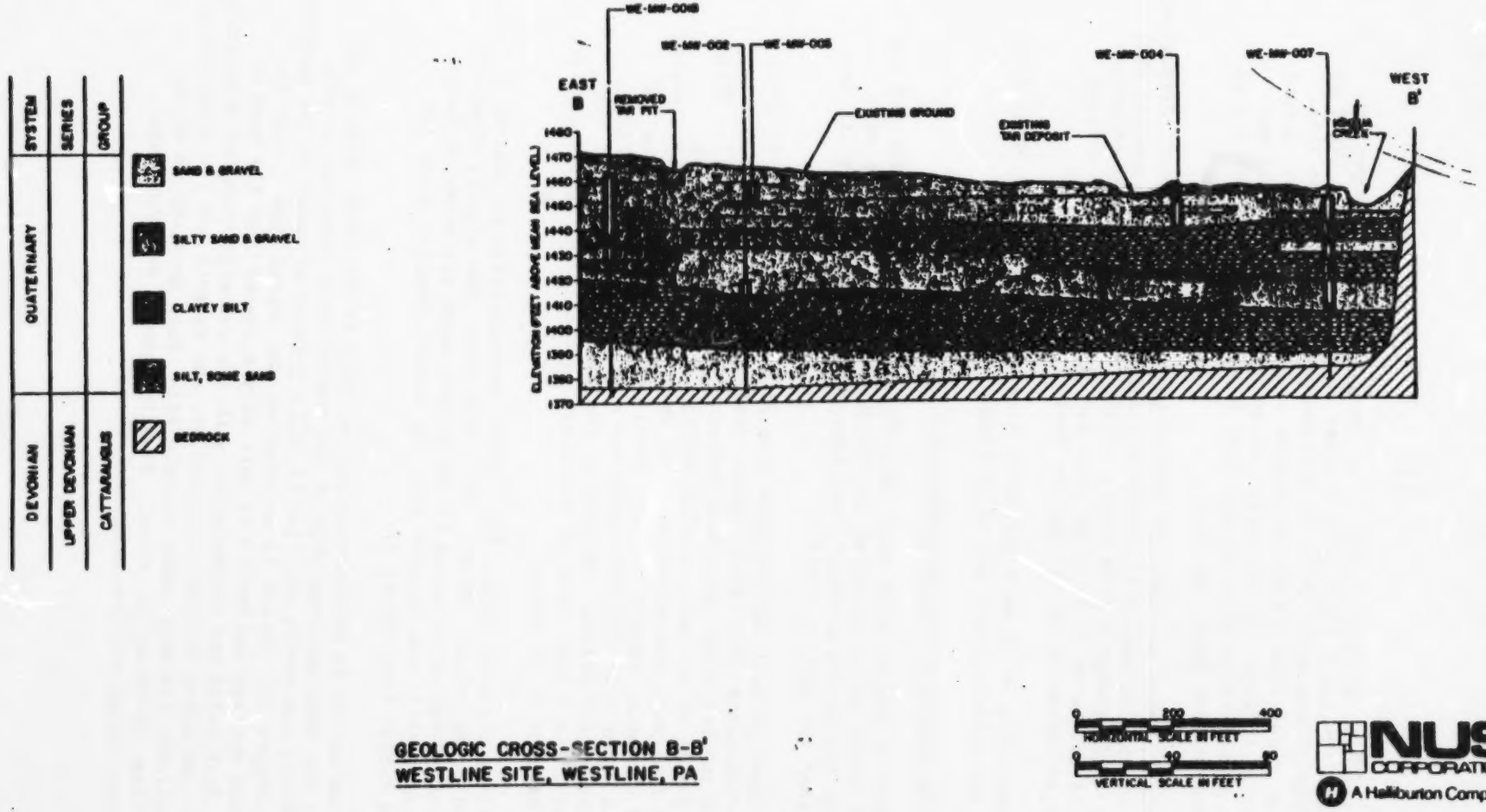

FIGURE 4

GEOLOGIC CROSS-SECTION B-B'
WESTLINE SITE, WESTLINE, PA

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The ground water flow in Zone 1 is southwest and discharges into Kinzua Creek. Figure 5 shows ground water contours which are based on the elevation of the water table at different locations on the site. Ground water flows from higher elevations to lower elevations. Ground water velocity in Zone 1 is estimated between 16.5 and 125 feet per year. The ground water flow through Zone 1 was estimated to be 1.3 to 10.1 gallons per day (gpd) per foot.

In Zone 2, there are only two monitoring wells and the exact direction of ground water flow cannot be accurately determined, but it appears that Zone 2 may be discharging into Kinzua Creek. The ground water velocity in Zone 2 is estimated to be 2,100 feet per year. Water flow through Zone 2 was estimated to be 137 gpd per foot.

No monitoring wells were placed in Zone 3 and the ground water flow direction and velocity were not determined.

Ground Water Chemistry and Contamination:

Samples of ground water were taken from five domestic wells and the eight monitoring wells installed for the RI/FS. These samples were analyzed by the US EPA contract Laboratory Program and the results have been reviewed for quality control.

The domestic well samples were free of detectable levels of EPA's Hazardous Substance list (HSL) organic contamination. However, well DW-004 did exhibit total petroleum hydrocarbons (TPH) at 2 mg/l. This could be due to an oil well located nearby. Two domestic wells exhibited inorganic contamination. One well (DW-001) exhibited elevated levels of chromium, cobalt, copper, iron, lead, nickel, vanadium and zinc. The other well (DW-004) contained elevated levels of barium, iron, chloride and sodium. Basically, the analyses showed that the ground water has a high level of dissolved particles and is not used for drinking because it is dirty.

In the monitoring wells, HSL organic contamination is limited to three monitoring wells: MW-001, -003, and -006. The organic chemicals and the concentration detected in the ground water are shown in Table 2. All three wells are located near the former chemical plant and excavated tarpit (See Figure 2).

Contamination in MW-001 consists entirely of low level phenols and creosols, the most water-soluble of the contaminants detected in site soils. MW-003 and MW-006 are cluster wells located adjacent to the Westline Inn (See Figure 3). MW-006 is screened at the top of Zone 1 near the water table surface and MW-003 is partially screened near the base of Zone 2. Both wells are contaminated with low concentrations of monocyclic aromatics including toluene, ethylbenzene and xylenes and low concentrations of naphthalene, the most water soluble PAH. Also detected in MW-006 were benzene (80-94 ug/1), phenol, 2-methylphenol, 4-methylphenol, 2,4-dimethylphenol and 2-methylnaphthalene.

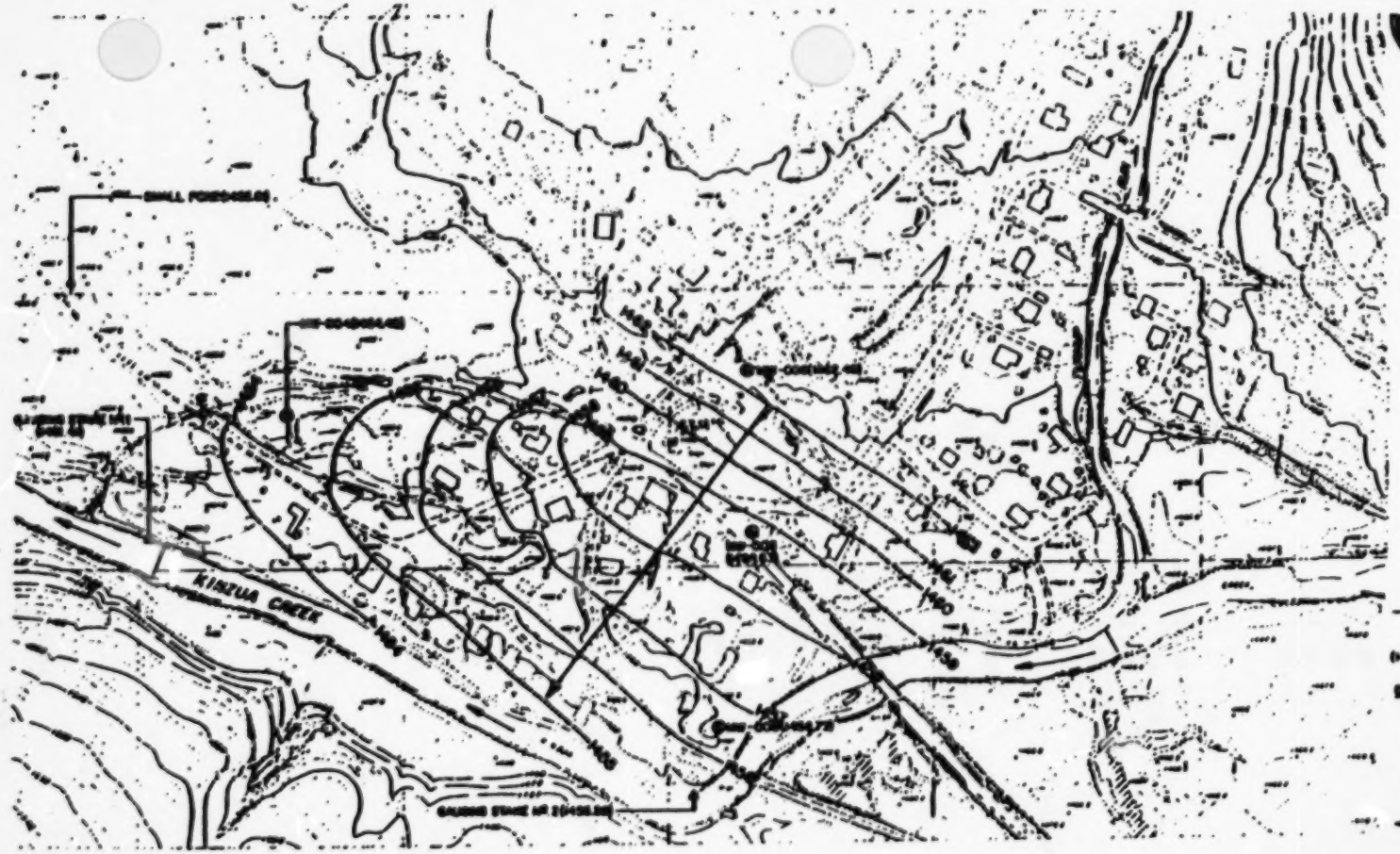
KIMTUA CREEK
NOTE: BASE MAP COMPILED FROM AERIAL PHOTOGRAPHY DATED APRIL 27, 1985. VERTICAL DATUM IS MEAN SEA LEVEL.
LEGEND
WATER TABLE CONTOUR LINE (SHORT DASH WHERE INFERRED)
(1482.46) ELEVATION OF WATER TABLE
DATA POINTS USED IN DETERMINING WATER TABLE CONTOUR LINES
MONITORING WELL
GAUGING STAKE (CREEK)
GAUGING STAKE (POND)
GROUNDWATER FLOW DIRECTION, ZONE 1
0
800
1600
SCALE IN FEET

FIGURE 5

WATER TABLE CONTOUR MAP
WESTLINE SITE, WESTLINE, PA

NUS CORPORATION
A Halliburton Company

Table 2

HSL Organics from Three Ground Water Monitoring Wells

MW-001		
Phenol	8 mg/l	J
2 - Methylphenol	11 mg/l	J
4 - Methylphenol	21 mg/l	J
2,4 - Dimethylphenol	34 mg/l	J
MW - 003		
Toluene	9 mg/l	
Ethylbenzene	12 mg/l	
Total Xylenes	43 mg/l	
Naphthalene	2 mg/l	
MW - 006 (with duplicate results)		
Benzene	80 mg/l J	84 mg/l J
Toluene	450 mg/l J	480 mg/l J
Chlorobenzene	480 mg/l J	-
Ethylbenzene	-	500 mg/l J
Total Xylenes	2,000 mg/l J	2,000 mg/l J
Phenol	66 mg/l J	160 mg/l J
2- Methylphenol	100 mg/l J	260 mg/l J
4 - Methylphenol	320 mg/l J	970 mg/l J
2,4-Dimethylphenol	160 mg/l J	360 mg/l J
Naphthalene	77 mg/l	71 mg/l
2 - Methylnaphthalene	43 mg/l	37 mg/l
TPH	2 mg/l	3 mg/l

J - lab qualifier indicating value is an approximate

The ground water contaminants represent the more water soluble contaminants found in the surface soils. Percolating precipitation is evidently leaching these contaminants from the soils to the ground water table. This mechanism probably explains the relative absence of phenol, the most water soluble site contaminant, from the surface soils. Phenol associated with the tar has either leached to the ground water or has been conveyed from the site by surface water runoff. Phenol was detected at only 3 ug/l in downgradient well MW-008 which is adjacent to Kinzua Creek. This detection is a good indication of the small extent of ground water contamination downgradient and the limited subsurface migration.

A ground water verification study will be conducted. The study will define the extent of contamination found in MW-006 and will provide more information to estimate the ground water flow velocity in Zones 1 and 2. This information will be evaluated and remedial action for ground water will be reconsidered.

Surface Water and Sediment Chemistry and Contamination:

Kinzua Creek and Turnup Run border the Westline Site to the south and east respectively. Kinzua Creek, a third order stream, flows westward for roughly four miles into the Allegheny Reservoir. Turnup Run flows southward to its confluence with Kinzua Creek. Both streams support a sizable population of fish and are used for recreational fishing.

Intersecting the site is a small unnamed tributary which discharges into Kinzua Creek. The tributary is not formed naturally but is man-made. The banks of the tributary have been carved with a backhoe. The tributary, which is fed by ground water, was probably used at one time to carry tar away from the main tar deposit area.

The objective of the surface water investigation was to determine if contaminants have been transported from the site and into the stream via surface runoff or ground water discharge. Surface water sampling locations are shown in Figure 2.

Surface water sampling locations SW-001 and -002 were chosen to determine background surface water quality. Sampling stations SW-004 and -005 were positioned directly adjacent to the site to determine the presence or absence of site related contaminants. Sampling locations SW-006 and -007 were selected on the unnamed tributary; one upstream of the tar deposit and one near the confluence with Kinzua Creek. To estimate the impact on downstream water quality, sampling location SW-008 was stationed along Kinzua Creek about one-half mile downstream from the site.

Eight surface water samples and a duplicate sample were collected in July, 1985. The samples were analyzed for full HSL organics and inorganics, total petroleum hydrocarbons, and standard water quality parameters.

No organic contaminants were detected with the exception of total petroleum hydrocarbons, detected at 2 mg/l at sample location SW-006. This detection may be attributed to surface runoff of oils from cars or trucks (SW-006 is located near the main intersection of the town).

A few inorganic contaminants were detected in the surface waters. Samples SW-006 and -007, taken along the unnamed tributary, had slightly elevated levels of manganese and lead when compared to background samples (SW-001 and SW-002) or other samples collected in Turnup Run and Kinzua Creek.

Sediment samples were obtained from all surface water sampling locations and were analyzed for full HSL contaminants. The analytical results are presented in Table 3.

Sampling locations SD-001, -002, -003, and -008 did not exhibit any contamination.

Samples collected from the unnamed tributary exhibited some organic contamination. For the most part, the contaminants were PAHs and coincided with those detected in the surface soils. The concentration of the contaminants ranged from 23 ug/kg (2-methylnaphthalene at SD-007). The PAHs have high soil/sediment adsorption coefficients and are only slightly soluble in water. These contaminants may have reached the sediments via surface soil runoff. The more mobile contaminants, namely toluene and 2-methylnaphthalene, were detected only in sample locations SD-006 and -007 respectively. However, neither contaminant was found in the surface waters. No pesticide/PCB contamination was detected in any of the samples.

Inorganic contamination, when compared with background samples SD-001 and -002, is limited to the unnamed tributary. Sampling location SD-006 exhibited very high concentrations of iron.

Surface and Subsurface Soil Chemistry and Contamination

The surface soils of the study area were investigated to determine areas which may exhibit contamination via migration from the tar deposits. The primary group of contaminants found throughout the site were PAHs. PAHs are relatively water insoluble and have low vapor pressures, therefore they tend to adsorb to surface or subsurface soils. The primary mechanism by which they may be transported is convection of particulates with surface water runoff. The widespread distribution of PAHs over the entire study area was a result of smokestack emissions of particulates from the chemical factory, which operated for over 50 years in combination with the seasonal flooding which can move soils around the site.

The average concentration of total PAHs in the soils at the Westline Site was approximately 1,000 ug/kg. This is not uncommon since other studies have shown the detection of PAHs in the upper soil layers to be between 100 to 1,000 ug/kg. The highest levels can be found near highways and industrial settings.

Although the average concentration of PAHs is approximately 1,000 ug/kg, one sample exhibited as high as 49,000 ug/kg of total PAHs. However, tar was reported to be mixed with the soil of this sample. Another soil sample revealed high concentrations of volatile, and acid-extractable contaminants such as ethylbenzene (9,100 ug/kg), total xylenes (30,000 ug/kg), and various phenolic constituents (over 75,000 ug/kg). This sample was collected near a tar deposit and tar was also evidenced in the soil sample.

Table 3

HSL Organics for Surface Water

SW-006	
Total petroleum hydrocarbons	2 mg/l

HSL Organics of Sediments

SD-004	
phenanthrene	23 mg/kg
fluoranthene	44 mg/kg
pyrene	30 mg/kg
benzo (b) fluoranthene	38 mg/kg
SD-005	
phenanthrene	65 mg/kg
fluoranthene	67 mg/kg
pyrene	57 mg/kg
benzo (a) anthracene	22 mg/kg
chrysene	35 mg/kg
benzo (b) fluoranthene	88 mg/kg
benzo (a) pyrene	47 mg/kg
SD-006	
toluene	35 mg/kg
fluoranthene	280 mg/kg
pyrene	320 mg/kg
bis (2-ethylhexyl) phthalate	260 mg/kg
chrysene	250 mg/kg
benzo (b) fluoranthene	540 mg/kg
SD-007	
2-methylnaphthalene	1,000 mg/kg
phenanthrene	570 mg/kg

A limited number of volatile and acid-extractable contaminants were detected during the surface soil investigation. The compounds generally have higher water-solubilities and vapor pressures than base (neutral extractables, such as the PAHs). Thus, the presence of monocylic aromatics and chlorinated aliphatics was not as significant in the surface soils since they are more susceptible to ground water or atmospheric transport. Soil samples collected during the drilling program support this phenomenon. Samples collected near the surface indicated mostly PAH contaminants. The more water-soluble contaminants, such as ethylbenzene and 2-methylnaphthalene, were found at 10-12 feet in the overburden material. With the exception of naphthalene, no PAHs were detected in any subsurface soil samples. (Naphthalene is a slightly mobile PAH). Table 4 shows the entire range of compounds found in the surface soil samples.

Aquatic Survey:

The purpose of this investigation was to assess any impact that may be occurring around the Westline Site on the local aquatic community resulting from contamination of the local waterway. Two components of the biota in the streams were assessed, the benthic macroinvertebrate and fish communities.

A total of 15 fish were collected and analyzed for HSL organics. Three different types of fish were analyzed: brown trout, white sucker and brook trout. The brown trout is stocked in Kinzua Creek. Table 5 summarizes the results. Very low concentrations of benzoic acid and 4,4'-DDE were found in 11 of the 15 samples.

The presence of these contaminants is not well understood for two reasons: (1) neither benzoic acid nor 4,4'-DDE were found in the sediment or surface water samples; and (2) some of fish containing these contaminants were collected upstream of the site. 4,4'-DDE, a chlorinated pesticide, is highly persistent in the environment. The bioaccumulation of this pesticide could have originated in any agricultural (including forest related) area in the Kinzua Creek watershed. Benzoic acid is a breakdown product of toluene. The oxidation of toluene forms benzoic acid. According to Ogata, et al. (1970), toluene is detoxified by oxidation to benzoic acid in mammals, which then reacts with glysine to form hippuric acid. Hippuric acid is rapidly excreted in the urine (Versor, 1979). This same reaction may be taking place in the brown trout. This is not to say that the source of toluene is the Westline Site, since upstream samples also indicated the presence of benzoic acid. Benzoic acid was detected in all three species of fish.

The results of the benthic study show reduction in the total number of benthic macroinvertebrates from one location in Kinzua Creek. This reduction is attributed to the discharges from the intermittent tributary. However, samples collected downstream of this point indicated a complete recovery. Overall the benthic community structure in terms of total taxes collected and total numbers is generally excellent in Kinzua Creek.

OCCURRENCE AND DISTRIBUTION SUMMARY OF HSL CONTAMINANTS IN SURFACE SOILS

PP No.	CAS No.	Compound	No. of Occur.	Concentration Range Min. (ug/kg)	Concentration Range Max. (ug/kg)
44V	75-09-2	Methylene Chloride	1	1000	1000
	67-64-1	Acetone	7	150	850
	75-15-0	Carbon Disulfide	7	10	160
30V	156-60-5	Trans-1,2-dichloroethene	4	13	49
23V	67-66-3	Chloroform	1	3	3
11V	71-55-6	1,1,1-Trichloroethane	6	2	18
87V	79-01-6	Trichloroethene	9	2	390
4V	71-43-2	Benzene	4	9	500
85V	127-18-4	Tetrachloroethene	2	3	10
86V	108-88-3	Toluene	41	2	11000
38V	100-41-4	Ethylbenzene	13	2	9100
	95-47-6	Total Xylenes	13	6	30000
	95-48-7	2-Methylphenol	3	150	75000
	106-44-5	4-Methylphenol	5	300	220000
	65-85-0	Benzoic Acid	19	81	10000
55B	91-20-3	Naphthalene	14	23	75000
	91-57-6	2-Methylnaphthalene	16	34	110000
71B	131-11-3	Dimethyl phthalate	1	4900	4900
77B	208-96-8	Acenaphthylene	13	28	1700
	99-09-2	3-nitroaniline	1	24	24
1B	83-32-9	Acenaphthene	5	26	1100
	132-64-9	Dibenzofuran	15	25	22000
70B	84-66-2	Diethyl phthalate	3	66	5000
80B	86-73-7	Fluorene	15	41	39000
62B	86-30-6	N-nitrosodiphenylamine	2	3800	37000
81B	85-01-8	Phenanthrene	53	23	27000
78B	120-12-7	Anthracene	25	31	3000
68B	84-74-2	Di-N-butyl phthalate	19	20	890
39B	206-44-0	Fluoranthene	62	37	14000
84B	129-00-0	Pyrene	60	58	11000
67B	85-68-7	Butyl benzyl phthalate	4	400	13000
72B	56-55-3	Benzo(a)anthracene	38	37	4400
66B	117-81-7	Bis(2-ethylhexyl)phthalate	18	22	4200
76B	218-01-9	Chrysene	37	56	5400
74B	205-99-2	Benzo(b&k)fluoranthenes	41	55	9800
73B	50-32-8	Benzo(a)pyrene	33	58	3900
83B	193-39-5	Indeno(1,2,3-cd)pyrene	15	40	1900
82B	53-70-3	Dibenzo(a,h)anthracene	4	70	790
79B	191-24-2	Benzo(ghi)perylene	13	29	2800
65A	108-95-2	Phenol	1	100	100
34A	105-67-9	2,4-dimethylphenol	7	1100	390000
31A	120-33-2	2,4-dichlorophenol	2	210	940
64A	87-86-5	Pentachlorophenol	1	450	450

TABLE 4

TABLE 5

HSL ORGANIC CONTAMINANTS FOUND IN FISH SAMPLES
WESTLINE SITE
(All values are presented in µg/kg)

PP. No.	CAS No.	Contaminant	NUS Sample Number: WE-FI-001 Sample Station: KC1 Type of Fish: Brown Trout Type of Sample: Fillets	WE-FI-002 KC1 Brown Trout Body Parts	WE-FI-005 KC1 White Sucker Body Parts	WE-FI-007 KC3 White Sucker Body Parts	WE-FI-009 KC3 Brown Trout Fillets	WE-FI-010 KC3 Brown Trout Body Parts	WE-FI-011 KC3 Brown Trout Fillets
		Volatile Organics (not analyzed for)							
		Base Neutrals (none detected)							
	65-85-0	Acid Extractables benzoic acid	170J	ND	ND	ND	740J	ND	400J
83P	75-55-9	PCBs/Pesticides 4,4'-DDE	ND	10	ND	ND	ND	20	ND

PP. No.	CAS No.	Contaminant	NUS Sample Number: WE-FI-012 Sample Station: KC3 Type of Fish: Brown Trout Type of Sample: Fillets	WE-FI-013 KC3 Brown Trout Body Parts	WE-FI-016 KC5 Brown Trout Fillets	WE-FI-018 KC5 White Sucker Body Parts	WE-FI-022 KC6 Brown Trout Fillets	WE-FI-024 KC6 White Sucker Whole Body	WE-FI-026 1R Brook Trout Fillets	WE-FI-027 1R Brook Trout Body Parts
		Volatile Organics (not analyzed for)								
		Base Neutral (none detected)								
	65-85-0	Acid Extractable benzoic acid	ND	ND	ND	750J	280J	ND	330J	380J
83P	75-55-9	PCBs/Pesticides 4,4'-DDE	7	10	ND	ND	ND	ND	ND	ND

J : Denotes an estimated value
ND : None Detected

Wetlands and Flood Plain Assessment:

According to the National Flood Insurance Program, the Westline Site lies within the 100-year flood plain. Most of the site area extending north to south from the Westline Inn to Kinzua Creek would be affected by a 100-year flood event. This includes the tar deposits located behind the Westline Church and those scattered throughout the southwestern and southcentral portions of the site.

These wetlands are extremely valuable to the environment at this site. The flood plain supports natural animal and plant life. It is valuable for storm water retention and it is also an area for ground water discharge. The natural functions and values of the wetlands make it necessary for remedial actions to protect the surface water, ground water and surface soils on the Westline community. The remedial action selected in the Record of Decision will minimize or eliminate the threat of further contamination to the wetland areas.

Public Health and Environmental Concerns:

To assess the risks to human and environmental receptors posed by chemical contaminants at or originating from the Westline Site, three major aspects of the chemical contamination and environmental fate and transport of site chemicals must be considered.

- The carcinogenic and non-carcinogenic health hazards associated with the organic and inorganic chemicals detected at the site.
- The potential for human or environmental exposure to site chemicals and the concentrations to which the receptors may be exposed.
- The risks associated with exposure to chemicals at the concentrations detected on site as compared with regulatory guidance.

From all the compounds found in the site area a list of "indicator chemicals" was developed for the Westline Site. Indicator chemicals were selected by considering the health related effects and the frequency of occurrence on the site. Table 6 lists these chemicals for concern. Table 7 shows the regulatory guideline values for these chemicals.

HSL organic contamination of ground water is limited to three site monitoring wells and poses little potential for direct human exposure at this time. Residential wells in Westline are not being used. Instead, the residents of Westline are using a spring, which emerges far upgradient of the study area. Contaminated ground water following the flow direction determined during the RI would ultimately discharge to Kinzua Creek. No HSL organics were detected in samples taken from Kinzua Creek or other site surface waters. Again, a ground water verification study will be conducted and EPA will reevaluate public health and environmental concerns.

Surface soil is the most contaminated environmental medium at the site. This is apparently due to the bulk transport of tar and charcoal via surface runoff. The predominant soil contaminants, PAHs, tend to adsorb to soils and are also likely to be dispersed from tar deposits via eroded soils.

Based on the chemical analytical data and the hydrogeologic conditions at Westline, the primary potential exposure mechanisms are felt to be associated with the contamination of tar and surface soils. These mechanisms include direct dermal contact with waste tars and contaminated soil, and the potential for the tars and contaminated soils to leach to the ground water which could be used for drinking water in the future.

Inhalation of soil contaminants is not considered a potential exposure mechanism for the following reasons:

- The extremely low vapor pressures of the predominant contaminants, PAHs, makes volatilization and subsequent inhalation of vapors unlikely.
- The lush vegetation of Westline, including wooded areas and lawns, provides adequate cover to limit fugitive dust and inhalation of contaminated particulates.

INDICATOR CHEMICALS AND RANKINGS
(ICF, INC. 1985)
WESTLINE SITE

carcinogenic chemicals	
Water	**Soil**
1. Benzene	1. Benzo(a)pyrene
	2. Dibenzo(a,h)anthracene
	3. Benzo(b)fluoranthene
	4. Benzo(a)anthracene
	5. Chrysene
	6. Ideno(1,2,3-cd)pyrene**

toxic chemicals	
Water	**Soil**
1. Phenol	1. Benzo(a)pyrene
2. Ethylbenzene	2. Ethylbenzene
3. Toluene	3. Benzene
4. Benzene	4. Toluene
5. Xylene*	5. Di-n-butylphthalate
	6. Bis(2-ethylhexyl)phthalate*
	7. 2-methylphenol*
	8. 4-methylphenol*

TABLE 6

Notes:

1. Score and ranking are derived for non-carcinogenic health effects of even known or suspected carcinogens.

** = Suspected carcinogen for which no toxicity index is available.

* = No toxicity index available but included because of prevalence or concentration.

REGULATORY GUIDELINE VALUES FOR INDICATOR CHEMICALS AT WESTLINE SITE

Chemical	ADI (mg/day)	AWQC (µg/l)	MCL (mg/l)	SNARL Chronic (µg/l)	CPI
PAHs (BaP)	NA	2.8 ng/l*	NA	NA	3,000
BEHP	42	15,000	NA	NA	NC
Di-butylphthalate	88	34,000	NA	NA	NC
Benzene	NA	0.66*	0.005**	70	40
Ethylbenzene	9.5	1,400	NA	NA	NC
Phenol	7	3,500	NA	NA	NC
Toluene	30	14,300	2.0**	340	NC
2-methylphenol	NA	NA	NA	NA	NC
4-methylphenol	NA	NA	NA	NA	NC
2,4-delmethyphenol	NA	NA	NA	NA	NC
xylenes (total)	160	NA	0.44**	620	NC
Naphthalene	18	NA	NA	NA	NC

TABLE 7

Notes:

NA = Not available

NC = Non-carcinogen

* = Based on 10^{-6} cancer risk

** = Proposed MCL (PMCL)

- The climate of Westline provides average annual precipitation of 49.5 inches in the form of rain or snow, which would eliminate particulate emissions during much of the year.

- The more heavily contaminated areas include bulk tar wastes, which are highly viscous and are unlikely to become airborne.

Potential human receptors of soil contaminants via exposure routes (dermal absorption and ingestion) are the residents of Westline and those who frequent the area to hunt, fish, hike or otherwise enjoy the outdoors.

A detailed risk calculation is presented in Volume I of the Westline RI/FS in Chapter 7. Under present site conditions, detrimental exposure is expected to occur only through prolonged direct contact with tar deposits or heavily contaminated soils. Chemical analysis of fish from Kinzua Creek indicate no significant risk for consumption of fish from local streams. Site conditions have been similar to present conditions for at least the past 30 years and have put no noticeable stress on the aquatic or terrestrial ecosystems.

Potential detrimental exposure to ground water contaminants would occur only if present usage changes and contaminated domestic wells were put back into use.

Review of Alternatives:

Remedial Action Alternative No. 1 - No Action

A no-action alternative must always be considered in order to determine the long-term effects a site will have on public and environmental health if nothing is done to clean up the site. The FS found this alternative unacceptable because it does not protect the ground water from contamination or prevent direct contact with the wood tar wastes.

- Technical Evaluation

This alternative will not require any implementation of remedial activities after the RI/FS other than a study to verify the extent and degree of aquifer contamination. The FS proposes a ground water verification study consisting of four shallow wells. One will be hydraulically upgradient from the contaminated MW-006 well and three will be downgradient. The wells will be sampled and analyzed for HSL organics. EPA will evaluate the results to determine if any further action is needed.

- Public Health and Environmental Concerns

The no-action alternative will not reduce any of the present or potential future risks to the public or the environment. The present unacceptable risks associated with the site are dermal contact with the wood tars and the potential future ingestion of ground water.

Remedial Action Alternative No. 2 - Excavation of Wood Tars and Onsite Landfilling

This alternative requires the construction of an onsite hazardous waste landfill. Following the landfill construction, wood tar deposits behind the Westline Church and in the southcentral and southwestern portions of the study area would be removed and placed in the landfill. An impermeable cap would be placed over the waste materials, and the excavated tar pits would be backfilled with clean soils. The soils would then be seeded. The baseline present-worth cost of Alternative No. 2 is approximately $644,000.

- Technical Evaluation

This alternative includes two key remedial technologies in addition to the ground water verification study. These are excavation and onsite landfilling. A new access road will be constructed to the proposed location of the landfill. A road must also be constructed for excavation of the tar pit behind the Westline Church. A landfill liner system will be constructed. This liner will cover approximately 6,000 square feet. Once the liner system has been constructed, the landfill is ready for deposition of the waste materials. A total of 710 cubic yards of tar and tar/soil wastes is estimated for onsite disposal. Conventional earthmoving equipment can be used to remove the tar deposits from the pit. The interspersed tar deposits will require excavation based on visual determinations and analysis of soils during excavation. Backhoe equipment, in combination with hand and shovel excavation, will be appropriate for the interspersed tar areas. All excavated materials will be placed in the onsite landfill and a multilayered cap will be placed on the cell. The landfill must comply with the U.S. EPA and Pennsylvania Department of Environmental Resources (PADER) hazardous waste regulations. Ongoing maintenance and monitoring of the landfill will be required.

Remedial workers will need dermal protective clothing during site work. Respiratory protection is not anticipated to be necessary. For safety precautions, air monitoring is recommended during excavation.

- Public Health and Environmental Concerns

Alternative No. 2 addresses all of the present and potential future unacceptable risks to the public including dermal contact and ingestion of ground water by humans.

Onsite disposal in a hazardous waste landfill is expected to provide containment of the waste tar materials and any liquid leachates. Residual risks to the public and the environment are expected to be negligible. A comprehensive post-closure care plan will be prepared that will address requirements for maintenance and monitoring. PADER will be responsible for the post-closure care.

Excavation of the tar deposits and construction of an onsite landfill will cause a temporary disruption in daily activities, mainly because of the operation of heavy equipment and haul trucks. Dust control measures will be used. Production of harmful vapors and gases is not expected, based on all available information on the tar materials, although an increase in objectionable odors might occur.

- Institutional Issues

All applicable Federal and state standards and regulations related to the remedial action will be met for Alternative No. 2, including onsite disposal of hazardous wastes.

Remedial Action Alternative No. 3 - Excavation of Wood Tars and Offsite Landfilling

This alternative requires that the wood tar deposits and the adjoining contaminated soils be removed and transported to a RCRA-approved hazardous waste management facility (HWMF). If this alternative is chosen, the wood tar waste materials could be taken to one of several facilities that meet RCRA standards. The baseline present-worth cost of Alternative No. 3 is approximately $409,000.

- Technical Evaluation

Excavation of wood tar deposits and of adjoining contaminated soils has been evaluated and described previously under Alternative No. 2. Therefore, technical evaluation of this technology will not be repeated. The technical evaluation in this section focuses on offsite landfill technology. Excavation and subsequent offsite disposal is a permanent remedial action for the site. Based on available data, this alternative will reduce the possibility of future contamination by removing the known sources of contamination. Offsite landfilling will not require periodic maintenance or monitoring by PADER. In addition, offsite landfilling will permanently remove the waste material and eliminate the aspect of potential failure of an onsite disposal unit.

- Public Health and Environmental Concerns

This alternative will address the present and potential future unacceptable risks to the public health and environment, including dermal contact and ingestion of ground water by humans. The removal and subsequent offsite landfilling of waste materials will provide adequate protection, maintenance, and monitoring of the disposal unit. The responsibility for proper disposal practices and long-term environmental assurances will be with a licensed hazardous waste facility, under the supervision of professional environmental scientists and engineers. The health and environmental impacts of excavation were previously evaluated and described under Alternative No. 2.

- Institutional Issues

Offsite disposal of waste materials in a permitted hazardous waste landfill facility fulfills the RCRA closure and post-closure requirements (40 CFR §264.310).

Remedial Action Alternative No. 4 - Excavation of Wood Tars and Offsite Incineration

This alternative, like Alternative *Nos. 2 and 3, completely removes the wood tar deposits and the adjoining contaminated soils. Like Alternative No. 3, it transports the excavated waste materials to a RCRA-approved, offsite incinerator, rather than disposing it on site. At the incinerator plant, hazardous materials will be destroyed by burning at high temperatures. Ashes remaining after the burning process will be properly disposed by the incinerator operator. The baseline present-worth cost of Alternative No. 4 is approximately $744,000.

- Technical Evaluation

Implementation of this alternative will result in excavating all wood tar deposits throughout the study area and subsequent hauling of these wastes to a permitted offsite incineration facility. Site remediation of this alternative will begin with excavating the wood tar deposits behind the Westline Church and in the southwestern and southcentral portions of the study area. The amount of excavated materials and the methods of excavation are the same as those described under Alternative No. 2. Therefore, the technical evaluation as well as the public health and environmental concerns of excavation are not repeated here. The remainder of this section focuses on the technical aspects and health concerns regarding offsite incineration.

Incineration is considered to be technically feasible because of the high heating value (approximately 11,000 BTU per pound) and low ash content (0.05 percent) of wood tar. Common types of incinerators that were considered for the destruction of the wood tar wastes were rotary kiln, fluidized bed, multiple hearth, and liquid injection incinerators.

Incineration is a proven technology for destroying hazardous materials, including the wood tars such as those at the Westline Site. Residual ashes, which remain after the thermal destruction of the waste material, will be properly handled by the operators of the incineration facility.

- Public Health and Environmental Concerns

The health and environmental impacts of this alternative are due to excavation activities rather than incineration. This is because the incineration is conducted off site at a licensed and approved RCRA facility. The health and environmental impacts of incineration on the local community are therefore eliminated.

As outlined under Alternative No. 2, the most significant impact of this alternative is the disruption of daily activities, mainly because of the operation of haul trucks and heavy equipment. Production of

harmful vapors and gases is not expected, based on all available information on the tar materials. Proper engineering practices during excavation will reduce the likelihood of emissions and associated respiratory problems. These practices would include dust control measures on local roads as needed.

- Institutional Issues

Offsite incineration at a licensed incineration facility will require compliance with both the RCRA requirements associated with the remaining ash residual and the emissions requirements as defined by the National Ambient Air Quality Standards (NAAQS).

Remedial Action Alternative No. 5 - Excavation of Wood Tars and Onsite Incineration

This alternative includes the complete removal of wood tar deposits and the adjoining contaminated soils. Following excavation of the contaminants, this alternative provides for onsite incineration in a mobile incinerator that is removed from the site when the project is completed. Ashes remaining after the burning process will be transported to a RCRA-approved facility. The baseline present-worth cost of Alternative No. 5 is $1,077,000.

- Technical Evaluation

Implementation of this alternative will require the excavation of all wood tar deposits throughout the study area and subsequent destruction of these wastes in a permitted incineration unit that will be mobilized to the Westline Site. The amount of excavated waste material, approximately 700 cubic yards, and the methods of excavation are the same as those described under Remedial Action Alternative No. 2. Therefore, the technical evaluation as well as the public health and environmental concerns of excavation are not repeated. The remainder of this section focuses on the technical aspects and health concerns regarding onsite incineration.

Rotary kiln was found to be the only type of incinerator available commercially as a mobile unit for onsite use and it is the incinerator best suited for soils. Portable, rotary kiln incinerators are generally mounted on tractor-trailer trucks for easy mobilization. A number of trailers are required to house the control room, laboratory, boilers, scrubber, and the incinerator. The waste material is usually belt fed in bulk form into a charging hopper and subsequently into the rotary kiln incinerator. Thus, there is no need to contain the waste material in drums prior to transporting it to the mobile unit.

The initial site activity will commence with the construction of a new access road. Following the construction of this road, excavated waste material will be hauled to the proposed onsite incineration area and stockpiled near the hopper. A temporary storage area will be needed to contain the excavated waste material prior to incineration. (The rate of excavation is greater than the rate of incineration). The dimensions and design details of this storage area will be determined during the design phase of cleanup.

- Public Health and Environmental Concerns

Alternative No. 5 will address all of the present and potential future unacceptable risks to the public and the environment.

Excavation of the wood tars and construction of an access road is expected to cause a temporary disruption in community daily activites, mainly because of the operation of heavy equipment and haul trucks. Safety considerations will include restricting the public from excavation areas and require control of equipment traffic within the community.

Dust control measures will be used, when necessary, to minimize the effect on adjacent properties. Generation of harmful gases is not expected from excavation, although an increase in objectionable odors might occur. Onsite air monitoring during excavation activities should be conducted to ensure protection to the community and the remedial cleanup personnel.

The operation of an onsite incinerator could potentially generate a substantial amount of noise. The proposed location for operating the incineration unit is approximately 200 feet from the closest residence. This factor will result in a nuisance problem, especially-if the unit starts early in the morning or continues to operate late into the evening. Emissions must meet RCRA standards and should pose no health threat.

- Institutional Issues

All applicable Federal, state, and local (county and township) standards and regulations related to remedial action will be met for Alternative 5, including onsite incineration of hazardous wastes.

Cost Evaluation Summary

The summary table given in Table 8 outlines the applicable capital costs, O&M costs, and low, baseline, and high present-worth costs for all applicable remedial action alternatives. Appendix B of the RI report presents additional detailed information regarding the development of these costs.

Recommended Alternative

Section 300.68 (i) of the National Contingency Plan (NCP) 50 Federal Register 47975 (November 20, 1985), to be codified at 40 CFR §300.68(i) states that the appropriate extent of remedy shall be determined by the lead agency's selection of the remedial alternative which the agency determines is cost effective (i.e., the lowest cost alternative that is technologically feasible and reliable) and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare, and the environment. In selecting a remedial alternative, EPA considers all environmental laws that are applicable and relevant. Based on our evaluation of the proposed alternatives, the public comments and the information received from the PADER, we recommend implementation of Alternative No. 4: Excavation of Wood Tars and Offsite Incineration.

TABLE 8

REMEDIAL ACTION ALTERNATIVES COST SUMMARY
WESTLINE SITE
(Costs are in 1986 Dollars)

Remedial Action Alternative	Capital Cost ($1,000)	Annual O&M Costs ($1,000)** Includes Monitoring and Post-Closure Maintenance		Present-Worth Costs ($1,000)		
		Years 1-5	Years 6-30	Low	Baseline	High
1. No Action	-0-	-0-	-0-	-0-	-0-	-0-
2. Excavation of Wood Tars and Onsite Landfilling	175	63	41	572	644	782
3. Excavation of Wood Tars and Offsite Landfilling	260	29	7	288	409	820
4. Excavation of Wood Tars and Offsite Incineration	595	29	7	455	744	1,746
5. Excavation of Wood Tars and Onsite Incineration	928	29	7	1,072	1,077	1,788

** These costs will be reevaluated after the groundwater verification study.

The specifics of the recommended alternative are:

1. The waste tar will be excavated from the existing pit behind the Westline Church, from the interspersed tar deposit areas in the south central western portions of the site along Kinzua Creek and from the banks of the unnamed tributary.

2. Backfilling the excavated areas with clean soil and revegetation will be required.

3. The tar deposits will be excavated to at least a 10^{-4} cancer risk based on a direct contact 20 year exposure of total PAHs. This level is chosen because it is similar to some of the background levels found in the community. The removal of the tar deposits will also insure that the remaining PAHs in soils will not leach from the soils to the ground water in concentrations that will exceed levels equivalent to a 10^{-6} cancer risk for ingestion of ground water. This level is approximately 70 mg/kg. Sampling and analysis will be conducted during excavation.

4. As a safety precaution, air monitoring will be conducted during excavation.

5. Packaging of the waste tar materials will be compatible with the incinerator facility's requirements.

6. Transportation of the waste tar materials will be conducted in accordance with State and Federal DOT requirements, including applicable RCRA requirements; the materials will be transported to a RCRA permitted facility for incineration.

7. A ground water verification study will be conducted to determine if the contamination at monitoring well MW-006 is present downgradient or in higher concentrations in the upper most zone of ground water. Specifics of the number and well locations will be determined in the next stage for design of the remedial action.

Operation and Maintenance (O&M):

O&M will not be required for the excavated areas. The RI activities have looked for any further pockets of tar and all the tar that was found will be removed, but since the site lies in the flood plain there will always be the possibility for major changes in the ground surface and the possibility for another tar seep to appear. Periodic inspections will be necessary to insure the effectiveness of the remedy selected here. Following the ground water verification study O&M will be reconsidered.

Consistency With Other Environmental Laws:

All waste materials will be transported and disposed in accordance with RCRA and DOT requirements.

A site specific risk assessment was conducted to determine the acceptable levels of total PAHs in soil and it is CERCLA policy that this approach to leaving acceptable levels of contaminants is consistant with the RCRA closure requirements.

National Environmental Policy Act requirements have been met by the FS evaluation of alternatives and the public participation during the comment period for the FS.

Since excavation will occur within the flood plain, any backfilling must comply with the Section 404 (b)(1) Guidelines of the Clean Water Act and the areas should be regraded to existing contours and with the same kind of soils. Also the State Dams and Encroachment Regulations will be considered during the design stage.

Evaluation of Alternatives Not Selected:

Remedial Action Alternative No. 1 - No Action was not selected because the present conditions would present continuing unacceptable risks.

These include:

- ground water - Potential risk from future leaching of phenols and benzene from wood tars is unacceptable based on a $<10^{-4}$ cancer risk.

- Wood tars - Dermal contact and ingestion risks are unacceptable ($<10^{-4}$ cancer risk).

Remedial Action Alternatives No. 2 and No. 3 Excavation of Wood Tars and Onsite Landfilling and Excavation of Wood Tars and Offsite Landfilling were not selected for a number of reasons: 1) Landfilling the wood tars will not provide the same degree of protection for the public health and environment as permanent destruction of the wastes; 2) Wastes which are placed into another landfill which may eventually cause another problem in the future; 3) The space in existing offsite RCRA facilities is valuable. The space available for disposal of industrial RCRA wastes is limited and is needed by our industries; 4) Since the waste tar material is not a RCRA waste, both of the RCRA landfill options less appropriate; 5) The wood tars have a relatively high heating value (approximately 11,000 BTU per pound) and low ash content (0.05 percent). These facts make incineration of the waste more suitable; 6) Additionally, landfilling is not as cost-effective as incineration because incineration will provide for permanent destruction of the wastes at a cost within the same order of magnitude of the landfilling options.

Remedial Action Alternative No. 5 - Excavation of Wood Tars and Onsite Incineration was not selected because the mobile and length of time needed to incinerate the 710 cubic yards in a small incinerator makes this alternative more expensive. Also, there will be greater community concern about health and safety for local residents from onsite incineration. It is also more costly than offsite incineration.

Overall, onsite incineration would be disruptive to the local community and storage of material to be burned and disposal of the ash would create additional planning and expense.

RESPONSIVENESS SUMMARY

WESTLINE SITE
McKEAN COUNTY, PENNSYLVANIA

JUNE 1986

This community relations responsiveness summary is divided into the following sections:

Section I: Overview - A discussion of the EPA's preferred alternative and the public's expected response to this alternative.

Section II: Background of Community Involvement and Concerns - A discussion of the history of community interest and concerns raised during the remedial planning activities at the Westline Site.

Section III: Summary of Major Comments Received during the Public Comment Period and of Agency Responses - A summary of comments and responses categorized by topic.

Section IV: Remaining Public Concerns - A discussion of community concerns that the EPA and the Pennsylvania Department of Environmental Resources (PADER) should consider in the remedial design and construction phases at the Westline Site.

I. OVERVIEW

The Remedial Investigation (RI) Report and the Feasibility Study (FS) Report were released to the public for review and comment on May 15, 1986. This marked the opening of the comment period, which extended to June 5.

At the time of the public comment period, the EPA had identified a preferred alternative for remediation of the Westline Site. Although expressing a preference, the agency presented a total of five remedial action alternatives in the Feasibility Study Report. The preferred alternative, referred to as Alternative No. 4, consists of the excavation of wood tar deposits and adjoining contaminated soils; transportation of the excavated materials to an offsite, RCRA-approved, incinerator plant where the materials will be destroyed by burning at high temperatures; and disposal of any ashes that remain after burning in an appropriate facility. This final step will be the responsibility of the incinerator operator.

Comments received during the public comment period indicated that most residents preferred the no-action alternative during the opening of the comment period. However, following a public meeting during which local citizens were able to discuss the Remedial Investigation and Feasibility Study Reports with State and EPA representatives, many residents expressed confidence in the EPA and Support for the agency's preferred alternative.

II. BACKGROUND OF COMMUNITY INVOLVEMENT AND CONCERNS

The Westline Site consists of several pits of wood tar that are all that remain of a wood processing plant that operated in Westline from the late 1800's until 1952. The tar pits, discovered in 1982 during a routine inspection of oil operations in the Allegheny National Forest, were of little apparent concern to local residents until the EPA proposed to perform an Emergency Response Action to remove the largest wood tar deposit from the property of the town's main industry, the Westline Inn. The EPA, prompted by the concerns of the Centers for Disease Control, intended to protect residents and tourists from dermal contact with the phenolic contaminants in the wood tar. However, the 50 residents who attended a public meeting to discuss the emergency action on March 3, 1983, were primarily concerned that persons owning property with wood tar deposits could potentially be held liable for the costs of cleanup. To protest this possibility, property owners refused to allow equipment onto their land to begin cleanup activities. Instead, they fenced the large wood tar deposit and placed sheet metal over smaller deposits. Although the EPA approved the installation of the fence in March 1983, an Emergency Response Action was performed in September 1983. Prior to this removal, the EPA capped the wood tar deposit with a 6-inch soil cover. In response to local complaints that tar was oozing from under the cap and creating an untolerable condition, EPA decided to excavate the wood tar and transport it to CECOS International's landfill in Niagara Falls, New York.

On October 18, 1984, another public meeting was held to discuss the Work Plan for the site and the tentative project schedule. Once again, the primary concern for the local residents was property-owner liability.

In December 1985, prior to the release of the RI and FS Reports, EPA held an open house at the Westline Inn to discuss remaining concerns. The open house was attended by a small number of citizens whose primary concerns were the amount of money being spent and the intrusion of government into their community. Most people expressed the opinion that the wood tars were an old, established feature of the community and that they were of little consequence. These people did not believe that the disruption of their community and the expense of remedial actions were warranted at the site.

These concerns continued and were presented by several residents at a public meeting on May 22, 1986. These and additional comments and concerns are discussed in the following section.

III. SUMMARY OF MAJOR COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND OF AGENCY RESPONSES

Comments raised during the Westline Site public comment period are summarized briefly below. The comment period was held from May 15, 1986 to June 5, 1986 to hear the opinions of concerned citizens on the remedial action alternatives recommended in the FS Report. The comments received during this period are categorized by relevant topics. At the time of the public comment period, EPA had focused on Alternative No. 4 (excavation/offsite incineration) as the preferred alternative.

Remedial Action Alternatives

1. With regard to Alternative No.1, no action, it was suggested that the community should be viewed as a collective agent with the right to choose to accept the risks posed by the wood tar deposits. It was also suggested that there are sites with more serious problems and that as taxpayers the local residents should have a voice as to how and where money be spent.

   EPA Response: The EPA is bound by law to protect the environment as well as the public health, and this site poses a threat to the environment. The wood tar pits should not be downplayed as a health hazard. Neither should cancer risk be the only factor considered. This town could grow; the water supply could become contaminated. Then, there would be even more people in need of water, and the site would be off the National Priorities List. Westline would be right back to zero.

2. Regarding Alternative No. 2, excavation of wood tar deposits with onsite landfilling, citizens wanted to know how deep the landfill would be and how it would be constructed.

   EPA Response: The landfill would be built above the ground surface. It would consist of a substructure with a plastic liner and a leachate collection system to catch anything leaking from the structure. It would be capped with a multi-layer, plastic-lined cap that would create a kind of vault.

3. Citizens inquired about the proposed action for a similar wood tar site in the nearby community of Kane.

   EPA Response: The EPA is trying to make these responses consistent, but the Kane Site is on a fast track, and the Westline Site is moving on a much slower course.

4. Citizens suggested two additional remedial actions for the site. One suggestion was to simply fence the site to prevent access. The second suggestion was to isolate the wood tar deposits by ringing them with concrete or other suitable material to prevent groundwater from contacting the wastes, and then, monitoring the groundwater to determine if the barrier is working. It was suggested that the barrier could be extended upward to create a wall to prevent access. Since monitoring wells already are in place this appeared to the citizen recommending it to be an economical solution that would require no further action unless leaks were detected.

   EPA Response: The EPA would still have to cap the site even if a barrier were in place. The agency really feels these wastes should be removed to prevent potential leaching into the groundwater.

   As everyone knows, caps have not worked well as shown in the past here at Westline. Also, these wood tar deposits are within a flood plain. Therefore, a specially designed cap would have to be constructed to withstand potential flooding.

Regarding fences, the EPA has found that these do not last long. Children see them as a challenge, and it doesn't matter if the fence is in a rural setting or an urban setting. The vandals may not even be members of the community. The EPA has lost fencing, and three trailers at a site in suburban Erie, Pennsylvania. It is almost impossible to protect fencing.

Technical Questions/Concerns Regarding Remedial Alternatives

1. One commentor was concerned that if the wood tar deposits were excavated and the resultant holes were filled with permeable materials, a void would be created that would draw water through the most contaminated areas, thereby increasing the likelihood that groundwater and surface water would become contaminated. Another inquired about an environmental impact statement regarding excavation of the wood tars.

   EPA Response: The wood tar deposits are estimated to be about 2 feet deep behind the Westline Church, and in other areas that border Kinzua Creek. Excavation at this depth is not expected to present a problem with regard to groundwater becoming contaminated through voids. If the wood tars are removed, the impact will be the protection of the groundwater.

2. The estimated construction start-up date and the time needed to complete remedial activities was of interest, and the idea of a visual determination of the presence of wood tars concerned some citizens who envisioned both project costs and duration escalating.

   EPA Response: If Alternative No. 3 or No. 4 is chosen, the time involved is primarily for excavation.

   Following the comment period, the EPA will produce a Record of Decision (ROD) that will explain why each discarded technology was rejected and why the alternative chosen was selected. Then a bid specification will be developed and the design phase will begin. When a contractor is selected construction can begin. It will be a surprise if the removal action takes more than one month once activity begins at the site. The only problem that might occur would be the discovery of an unexpected quantity of wood tar. Seeps may keep cropping up in some areas, and the EPA wants to be sure they are removed. This will require an on-scene coordinator to make a visual determination. Soil samples will be analyzed to be sure the soils are cleaned up to at least 70,000 µg/kg for carcinogenic polynuclear aromatic hydrocarbons. The EPA wants to prevent future outbreaks of wood tar on the ground surface. However, there is no effective way to remove all the wood tar deposits in this area, and so wood tar deposits may surface elsewhere. The pit can be removed though, and there will not be any more deposits like that occurring.

3. Several comments addressed the possibility that bids received for site remediation might be higher than anticipated. Commentors felt that, if the price increased significantly, the EPA should consult the community before

proceeding with remedial activities. Inquiries were also made about the possibility that the community might agree to the removal of the wood tar deposits yet feel that a cheaper method could be found.

EPA Response: If the bids received by the EPA are higher than anticipated, the EPA will have to decide what it is willing to pay. The only time the agency will return to the community is when the recommended alternative changes from what was presented during the comment period. If the EPA decides the bids received are too high, then it may be necessary to select another alternative, and that would bring the EPA back to the community. Congress is pushing very hard to get sites remediated. The new law will require not only cleanup but cleanup by a certain date. (The latter response was an indication that there wasn't time to begin searching for another remedial alternative).

Public Health and Environmental Concerns

1. Concerns were expressed about groundwater. One commentor asked that the difference between groundwater and surface water be explained, and others sought reassurance that no one was at immediate risk from the water supply in use.

   EPA Response: Groundwater is the water beneath the ground surface. Local domestic wells obtain their water from the groundwater. All the domestic wells were tested and found to be clean. None contained the organic chemicals or gasoline-type compounds associated with the wood tar deposits. Only one monitoring well had unacceptable levels of contaminants; and that well is not in use as a source of drinking water. Sampling did show that a lot of particulates occur in the groundwater in this area which is probably the reason that residents had already stopped using their wells and started using water from the upgradient springs instead. A new water line is not necessary; the groundwater is not a health risk at this time. Wood tars will not dissolve easily but there is a potential for them to leach into the groundwater eventually. The only immediate threat comes from people who are coming into direct contact with the wood tars.

2. One commentor challenged the EPA's contention that a serious health risk is present in Westline. He suggested as a comparison that the local inn presented an increased risk of cirrhosis of the liver but that the Federal Government had no right to dictate whether the community took that risk or not. Another resident stated that the agency hasn't established that a potential for contact exists. This individual said that, since the most notable contacts had been made accidentally, they should be considered singular incidents and should be disregarded.

   EPA Response: The EPA has singled out one contaminant, benzo(a)pyrene, from all of the other contaminants as an indicator of health risk. This contaminant is found in the wood tar and has been singled out because it is the only one of the entire group of polynuclear aromatics (PNAs) found at the Westline Site that is known to cause cancer. In truth, PNAs can be found in all tars. The tars on the road and the tars on your roof also contain it.

agree or disagree. Most people seem to prefer this. However, EPA has presented several possibilities, all of which meet all of the requirements placed on the agency by the Congress.

The EPA cannot accept a no-action alternative at this site because it would allow the risks of dermal contact and groundwater contamination to continue. The EPA wants the tars removed, and all of the suggested alternatives include excavation of the wastes and adjoining soils. The agency also intends to do a verification study of the groundwater to determine the extent of groundwater contamination regardless of which alternative is chosen, but there is no reason to believe it will be necessary to pump and treat groundwater at this time. The PNAs in the local soils are not above acceptable levels, just in the wood tars.

Regarding the location of an onsite landfill, the former plant site was chosen because it is the source of the problem. It would be unfair to locate a landfill on the property of anyone who was not responsible. However, the EPA is leaning away from landfilling when it is possible to get rid of wastes more efficiently. In response to the commentor indicating that the landfill would be upgradient of the local water supply, that is incorrect.

2. A commentor asked if, in overriding the public opinion with regard to the no-action alternative, the PEA is setting a precedent that every time a tar pit is exposed the EPA will step in and remediate it.

   EPA Response: Yes, the EPA is setting a precedent.

Costs/Funding Issues

1. A number of residents were concerned about the cost of remedial action. They questioned whether it was necessary to choose Alternative No. 4, one of the most costly alternatives, yet they also wondered if the most expensive alternative, Alternative No. 5, which called for onsite incineration might be a good idea if it could provide jobs for local citizens. They reminded the EPA that even if the cleanup is funded by the chemical industry, the consumer still pays the bill in increased product costs. One citizen suggested that the EPA was "bilking" the chemical industry and "squandering" the money in choosing a more costly remedial alternative.

   EPA Response: The EPA prefers Alternative No. 4 over Alternative No. 3 because the agency is moving away from landfilling. Incineration saves valuable landfill space and prevents the excavated wastes from becoming a problem for another community at some time in the future. Although it is true that the consumer does pay an increased product price, 85 percent of the cost of Superfund is paid for by the U.S. chemical industry. Where a responsible party is identified and is still in operation, the EPA requires that the Superfund be reimbursed, but this isn't possible at Westline.

   The cost of the preferred alternative is very modest by Superfund standards. The EPA is neither squandering Superfund monies nor bilking the chemical industry. It is using the monies as they were intended to be used. By

The agency worries about the cancer risk associated with the compounds found at the site. It considers the concentration of this compound that will cause cancer in 1 out of a million people, if those people are exposed to the compound for a 70-year lifetime. The amount of benzo(a)pyrene found at Westline can be expected to cause cancer in 1 out of 10,000 people. Because Westline is a community where people live all of their lives, the EPA feels that the wood tars are unsafe.

Also, there is more to the health risk issue than the potential to cause cancer. There are other diseases, such as liver disorders, that can be associated with the contaminants at Westline. There is also the potential for accidents, even fatal accidents, to occur. The EPA wants to remove those risks, and it also wants to protect individuals, such as children and tourists, who have no say in this matter.

3. Citizens were concerned about the impact removal actions might have on air quality. They recalled that, during the earlier emergency removal, odor was a problem for the community and especially for those at the Westline Site.

EPA Response: During removal actions the EPA will monitor air quality. This is part of the impact statement, and it it included in the project costs. These wood tar deposits are unlikely to create must dust, but if it appears that dust is a problem, the area will be hosed down with water. That's a simple and accepted engineering practice. There will be monitoring for other air releases as well. The problem of smell is another matter. The wood tars do smell and air monitoring will be conducted throughout the excavation activities to ensure public safety.

Public Participation Process

1. Some commentors were angry that the no action alternative was ruled out by the EPA before the public comment period opened. They suggested that the agency had already made its selection of an alternative and was merely going through the motions to make the public feel involved in the agency choice. One commentor cited Alternative No. 2, which called for an onsite landfill to be constructed on the site of the old wood processing plant, as an example of the EPA's effort to manipulate the public. This individual reasoned that no one in the community would vote to locate a landfill above the town's only commercial business and upstream of the drinking water supply; therefore, he felt that, by presenting this alternative, the EPA had deliberately narrowed the number of acceptable alternatives. Commentors wanted to know if the EPA had ever discarded its preferred alternative also the local community objected to the agency's choice.

EPA's Response: The EPA has changed its choice of alternatives in the past because of public opinion. The public comment period is the time to speak up. But, the EPA reserves the right to disagree.

Consideration of the no-action alternative is required under Superfund so that the risks of no-action are fully understood. A preferred alternative is also presented so that the public has a specific remedial alternative with which to

Funds for this site are not available at this time, but when they become available, we will spend them on the chosen alternative.

4. As a point of interest more than concern, one resident observed that, if the EPA has as many people at other Superfund sites as it has in the Westline area, there must be "6 million people" on the EPA payroll. Another citizen mused that, if the community chose Alternative No. 3 instead of Alternative No. 4, the government might be induced to allow the community to split the $300,000 saved.

   EPA Response: Not all the people in the Westline area are EPA employees, although their work is funded by the EPA, but some areas are heavily burdened with Superfund sites, and many EPA personnel are in those areas. New Castle County, Delaware for instance has nine Superfund sites. There are 888 sites on the National Priorities List and more than 24,500 sites on the CERCLA list. And we are only talking Superfund; there are also programs for air, water, RCRA, injection wells. The EPA is a very long arm.

   (The commentor who wanted to divide saved funds among community residents was advised good-naturedly to see his legislator.)

Other Issues

1. A primary concern of the Westline community was to realize an economic benefit from remedial activities. Inquiries were made concerning the use of local contractors and laborers. The EPA was asked to make BOA forms available in the community.

   EPA Response: The government is required to take bids for this work, but there is no reason why local contractors can't bid. Bids are handled by the Corps of Engineers. The EPA can certainly make BOA forms available locally and also request that the Corps advertise heavily in this area. Normally, the call for bids is advertised in the Congress Business Daily, and anyone can respond to it.

2. A number of citizens stated that Westline received a great deal of negative publicity when the site was first placed on the NPL. They felt that the EPA was responsible for telling the world that Westline had a problem and that it would be only fair to expect the EPA to make an equal effort to notify the world, when the problem is resolved. These people cautioned the EPA that, if an effort is going to be made to promote the town to outsiders, the wording of promotional statements will be most important. The term "monitoring" was considered to connote an ongoing problem.

   EPA Response: The EPA is gearing its public involvement to promoting community cleanup, and it is very eager to hear public viewpoints on this subject. When the remedial actions are completed, Westline will not have a problem anymore. The EPA will try to convey this message to the public.

comparison with other Superfund cleanups, $400,000 to $700,000 is not very much. Some sites cost as much as $30 million, and sometimes the people involved complain that the EPA is not doing enough.

The Westline Site is not as serious a threat as those sites, but it is on the National Priorities List, and the EPA must clean it up.

Regarding Alternative No. 5, which calls for onsite incineration, that could be the Agency's second choice, but it would be likely to provide jobs for local residents. Both the incinerator and the personnel to operate it would come from out of town.

2. Several commentors raised issues related to property value. They inquired whether the EPA was required to include an impact statement concerning property values in its report. One citizen discussed the fact that, although the law requires sellers of property to disclose the presence of a hazardous waste site at the time of a sale, many sellers are failing to do this, and unsuspecting buyers are suffering.

EPA Response: There is no requirement that the EPA attempt to project or reimburse personal losses due to the existence of a hazardous waste site. One of the ongoing battles in Congress is about compensation for the victims of others' actions. Congress has not yet been able to tackle this issue. In fact, the liability issue will be the most difficult and one of the most visible of all issues before the Congress.

Insurance is a very expensive proposition, and it is extremely difficult to determine where to draw the line. For instance, if one were to seek compensation for a health-related matter, how could it be determined if health problems relate to a site and not to personal habits such as smoking or to employment factors.

While it is true that the law requires property owners to disclose the presence of hazardous wastes on site at the time a property is sold, these laws are relatively new. Some sites are so old that no one knows they are there. Some states are beginning to make these laws very harsh. In New Jersey, the law requires that sales be voided and sellers be fined, if it can be shown that a seller lied at the time of sale.

3. One comment concerned the breakdown of costs and the difference in the costs of the various alternatives. Another concern was whether the funds for remedial action at Westline were already committed.

EPA Response: Capital costs include the cost of design and installation and also the cost of transporting excavated materials to the required facility. Operation and maintenance costs for Alternative No. 2 include the expense of maintaining a leachate collection system and monitoring the groundwater for 30 years. The difference in operating and maintenance costs among the alternatives is only about $150,000.

ATTACHMENT A

COMMUNITY RELATIONS ACTIVITIES CONDUCTED AT THE WESTLINE SITE

- A press release announced the appropriation of funds to perform an Emergency Response Action. It also announced a public meeting to discuss the planned response, February 1983.
- A public meeting was held at the Westline Inn to discuss the Work Plan and the proposed project schedule. Prior to the evening meeting, a briefing of local officials was conducted, March 1983.
- A press release announced a public meeting which was held to discuss the planned schedule for the Remedial Investigation (RI), October 1984.
- An open house was conducted at the Westline Inn to discuss the RI Report with interested parties, December 1985.
- A press release was issued to announce a public meeting concerning the Feasibility Study Report, May 1986.
- A fact sheet concerning Remedial Action Alternatives was prepared and distributed at a public meeting held at the Westline Fire Hall, May 1986.

It is a misconception to view monitoring negatively. Monitoring is a safety valve. As figures are published each year and the numbers decrease, it is proof that things are improving, and everyone will be able to see it.

3. One commentor inquired whether EPA would see that the media present Westline favorably, and one wondered if it would be a lie to say that the town, following removal actions, will be safe.

   EPA Response: The EPA does not control the media, but it can try to present what should be said about the site in the site documents. The EPA knows that there are other tar pits in northwestern Pennsylvania. The precedent that the agency is trying to set is that these wood tar deposits be removed from the surface where they can present a dermal threat. There is always a potential for recurring problems at hazardous waste sites. Sometimes all the EPA can really do is to put a bandaid on a site, but a removal action is the best cleanup I can do. I am going to say that the site is cleaned up. That is how it is going to come out.

A statement was made by one of the lifelong residents of Westline. He said that he had come to the public meeting believing that he wanted to support the no-action alternative but that he had changed his mind. He did not feel that he would benefit much from the remedial activities, but he believed that the EPA was on the "right track" and that his grandchildren might benefit from the Agency's efforts. he also suggested that the most vocal opposition to the EPA's plans came from individuals who had been in the community less than 1 year and who did not own property there. His support of the EPA's preferred alternative was immediately joined by other residents.

IV. REMAINING PUBLIC CONCERNS

Issues and concerns that the EPA should remain aware of during the remedial planning activities include:

1. The belief that, in order for the site cleanup to be truly beneficial to the community, local residents must realize a share of the monies being spent.

2. The particular sensitivity of local residents to the way that site activities are being presented to the outside world via EPA representatives and the media.